

Quicklook data from the isoprene volcano

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Isoprene

- dominant NMVOC emitted by vegetation
 - 535 Tg yr⁻¹, 50 % of total NMVOC emissions
- major precursor of organic aerosol
- major precursor of tropospheric ozone
- major sink for atmospheric OH

The isoprene volcano

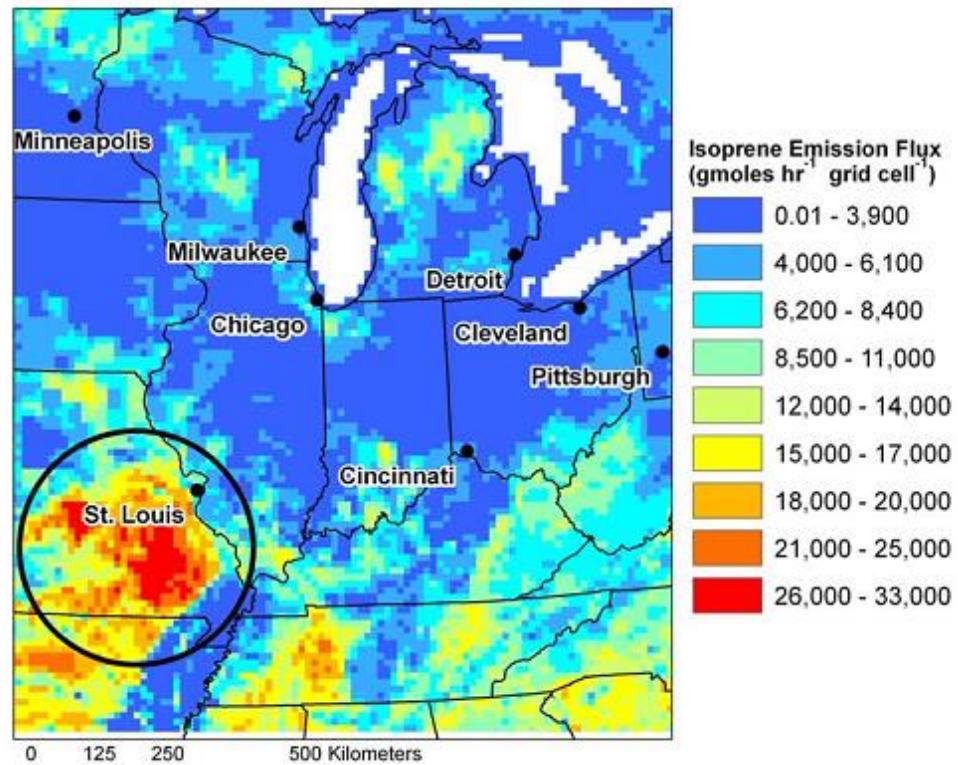
(SE MO)

Site Name

| | | |
|-------------------|----------------------|--------------------|
| Ft. Leonard | Willow | Sinkin |
| Wood, Missouri | Springs, Missouri | Creek, Missouri |
| | | |

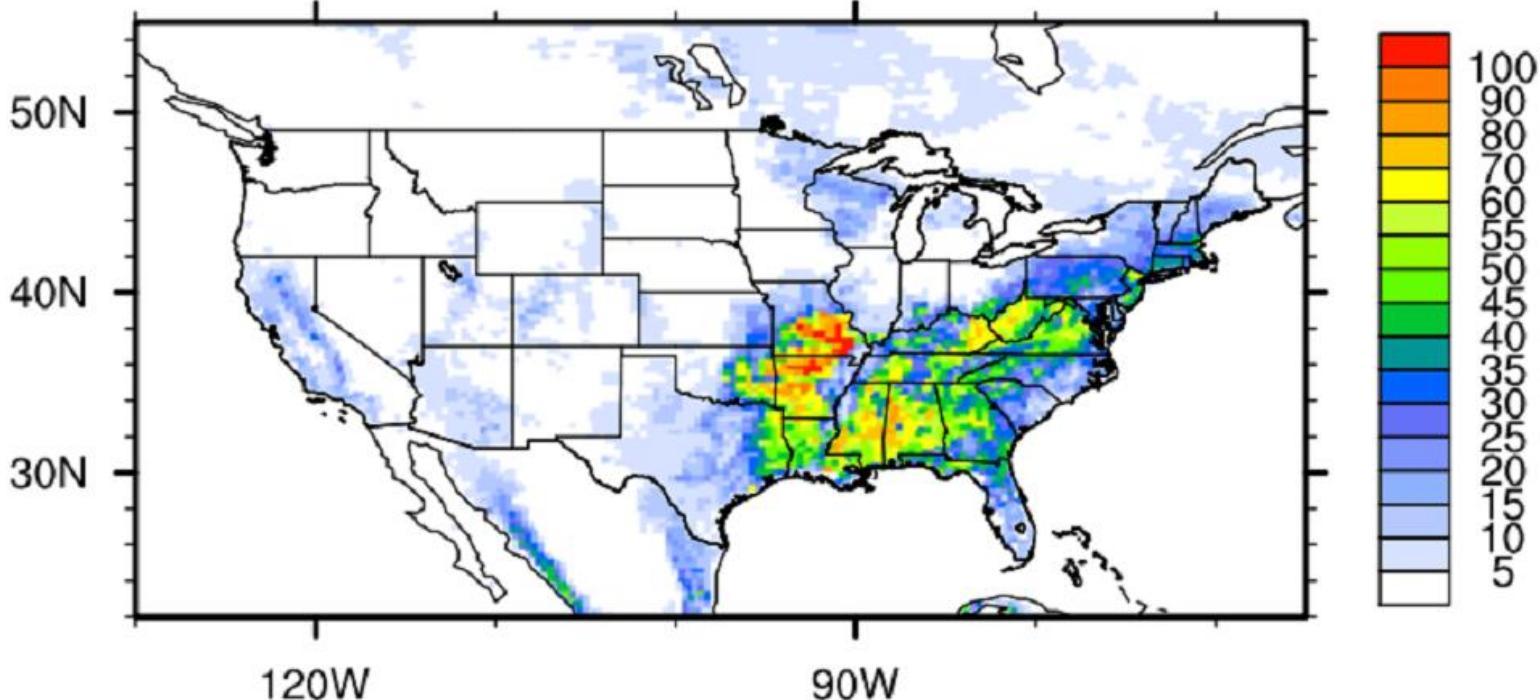
Isoprene

| | | | |
|-------------|----------|----------|----------|
| Mean, ppbv | 10.8 | 15 | 15 |
| Range, ppbv | 1.8–35.8 | 8.2–27.2 | 6.6–24.2 |

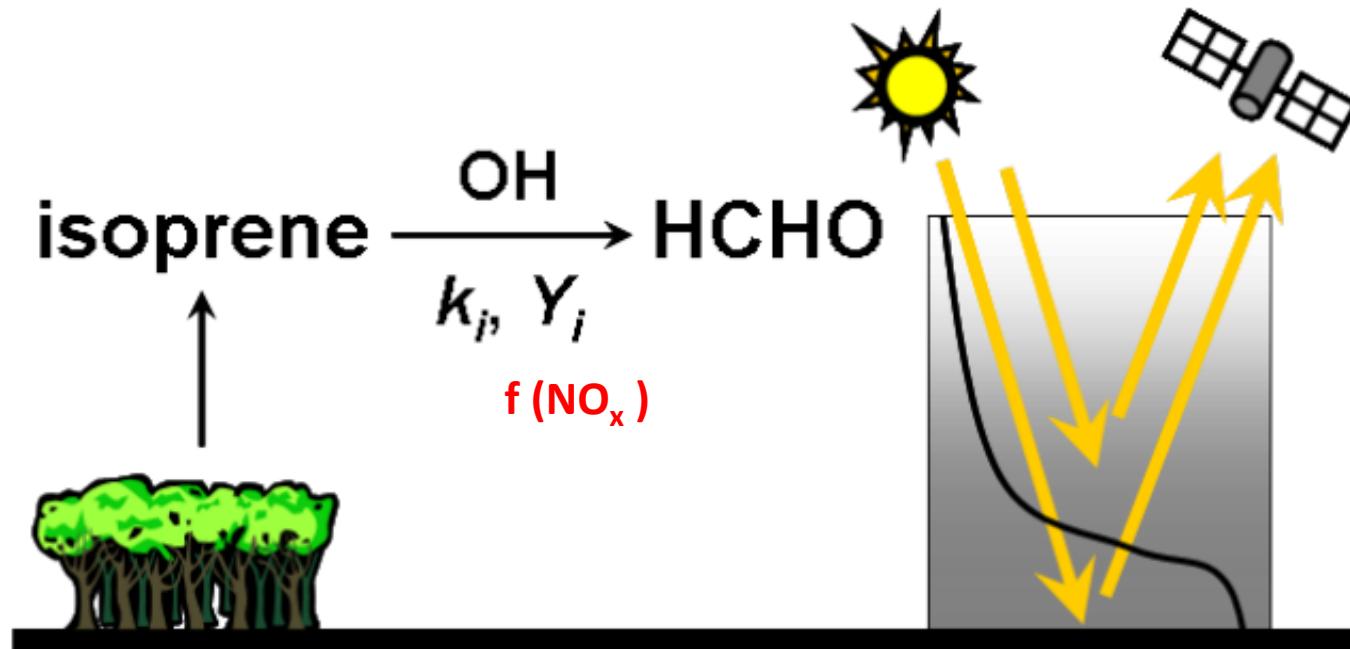


Current inventories

WRF-MEGANv2.1 (offline): Isoprene (micro-moles/m²/hr)



Indirect isoprene emission mapping



Satellite-derived isoprene

OMI HCHO: June–August 2006

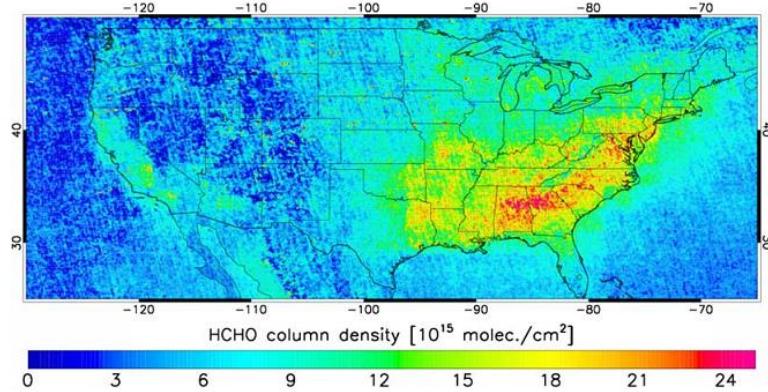


Figure 1. Mean OMI HCHO columns for June–August 2006 mapped on a $0.1^\circ \times 0.1^\circ$ grid.

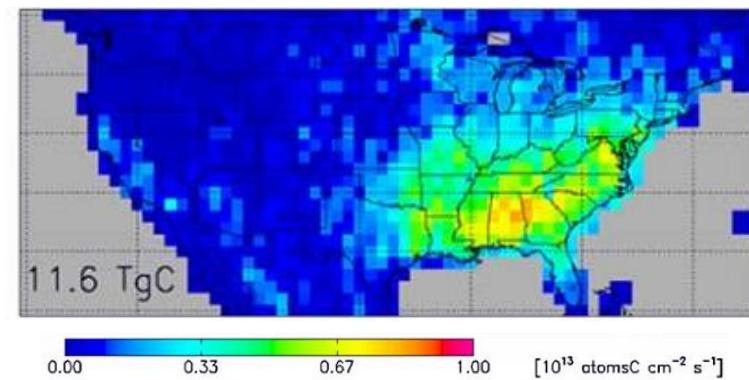
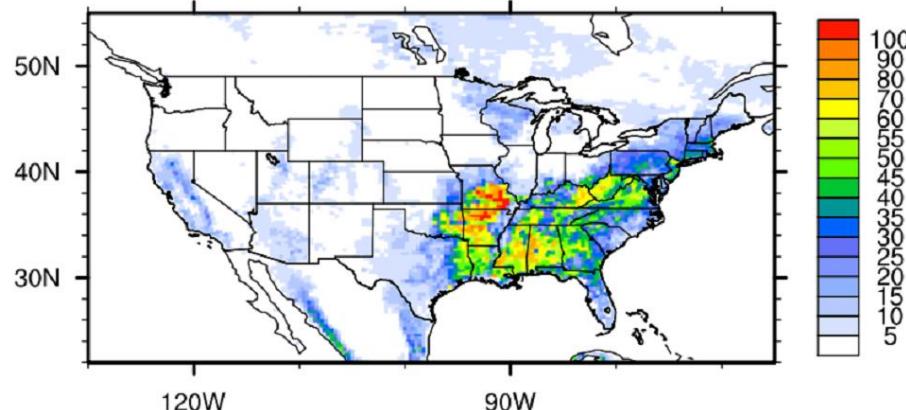


Figure 12. OMI isoprene emissions (June–August 2006) at 12:00–15:00 local time

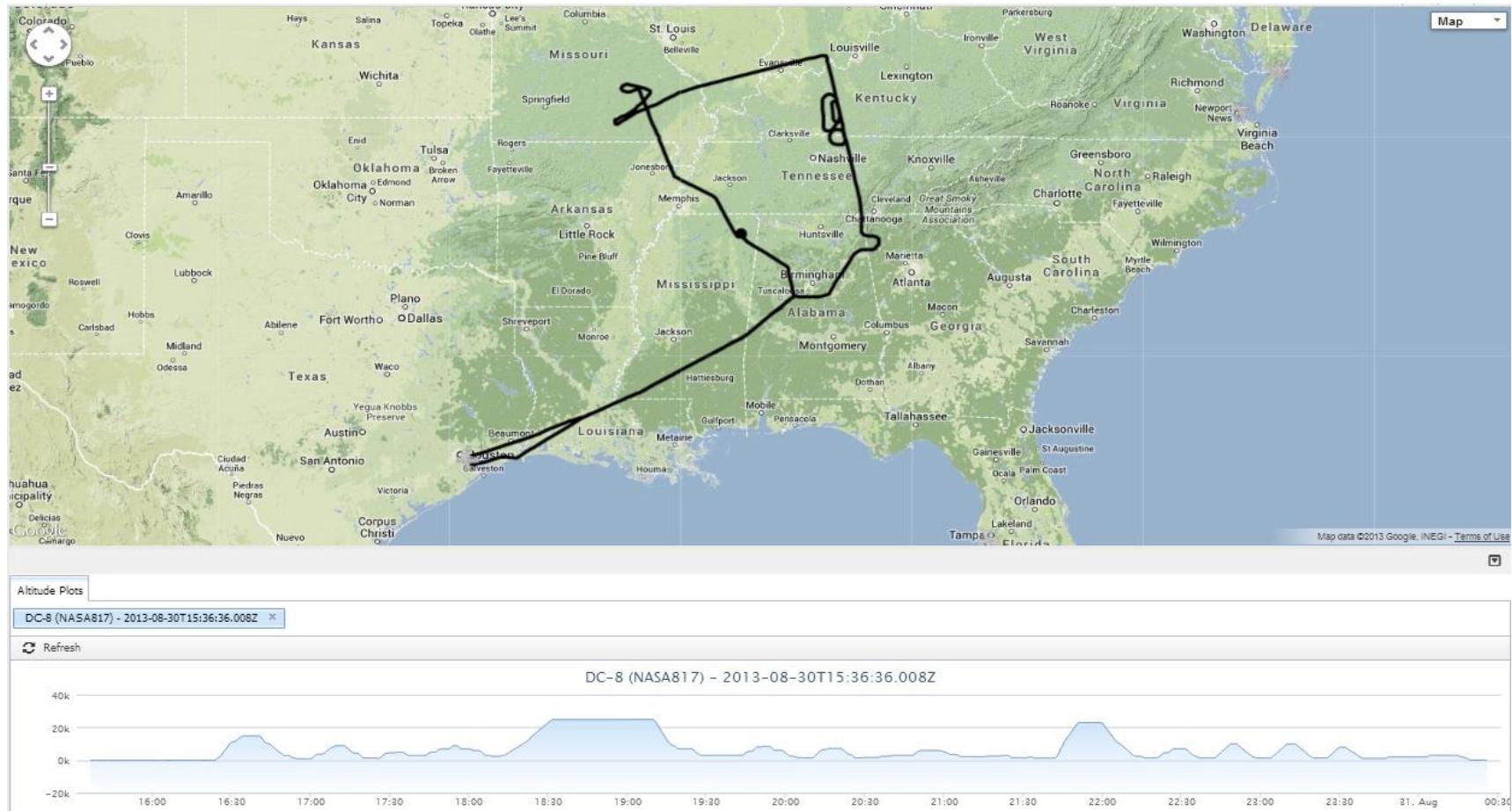
Millet et al., 2008

WRF-MEGANv2.1 (offline): Isoprene (micro-moles/m 2 /hr)

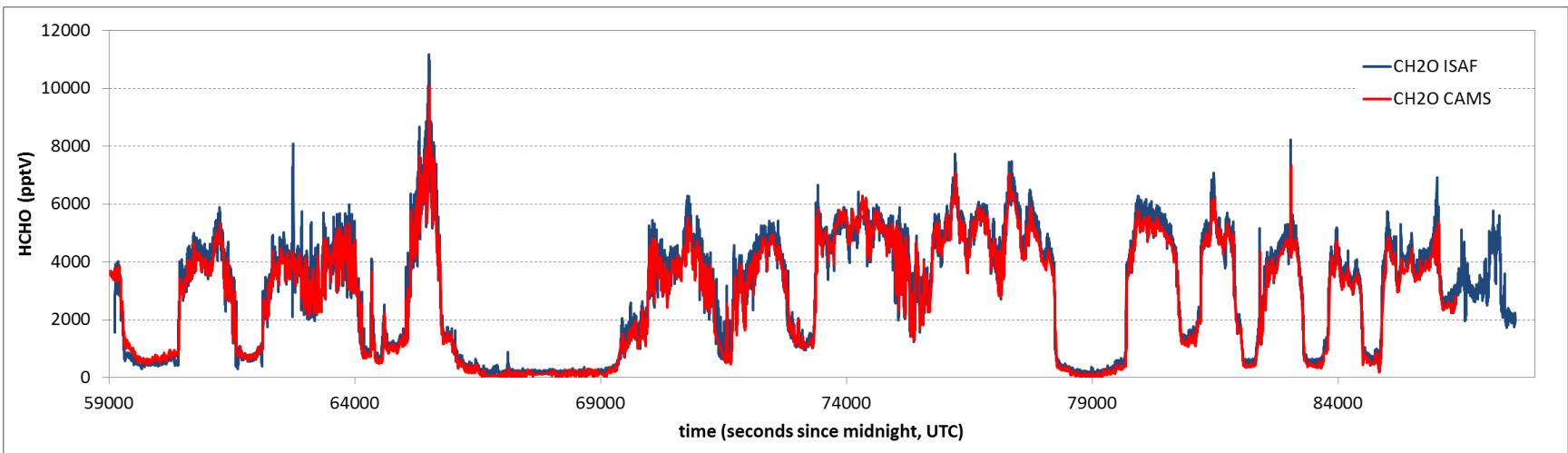
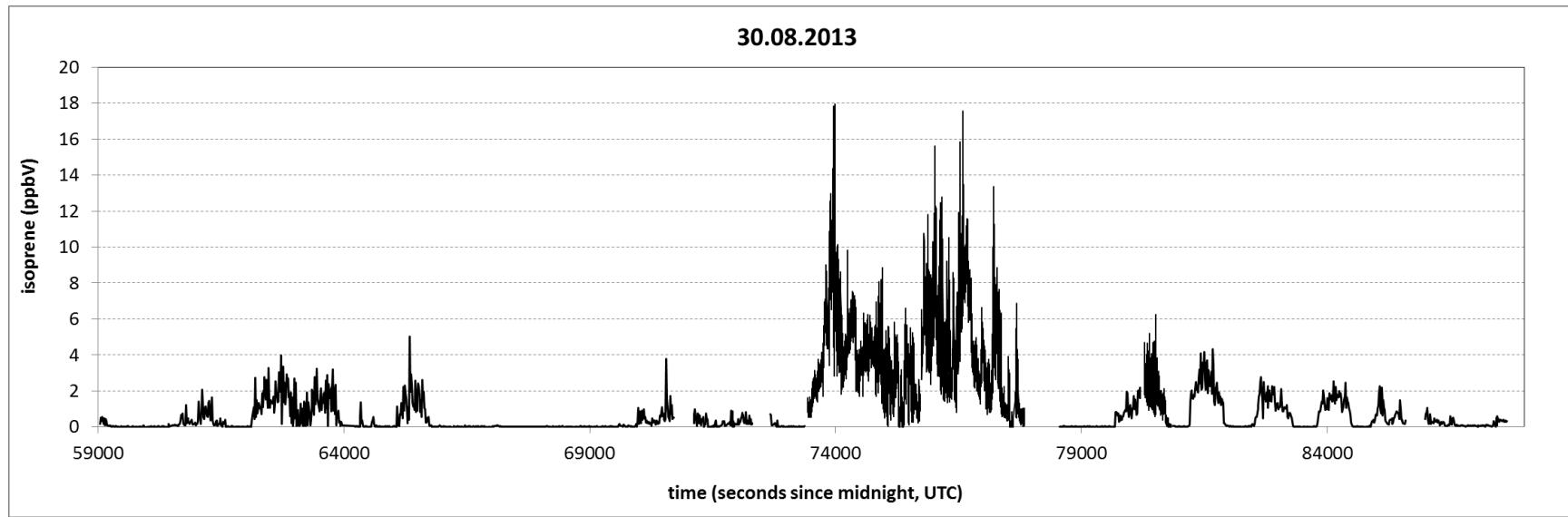


Guenther et al., 2012

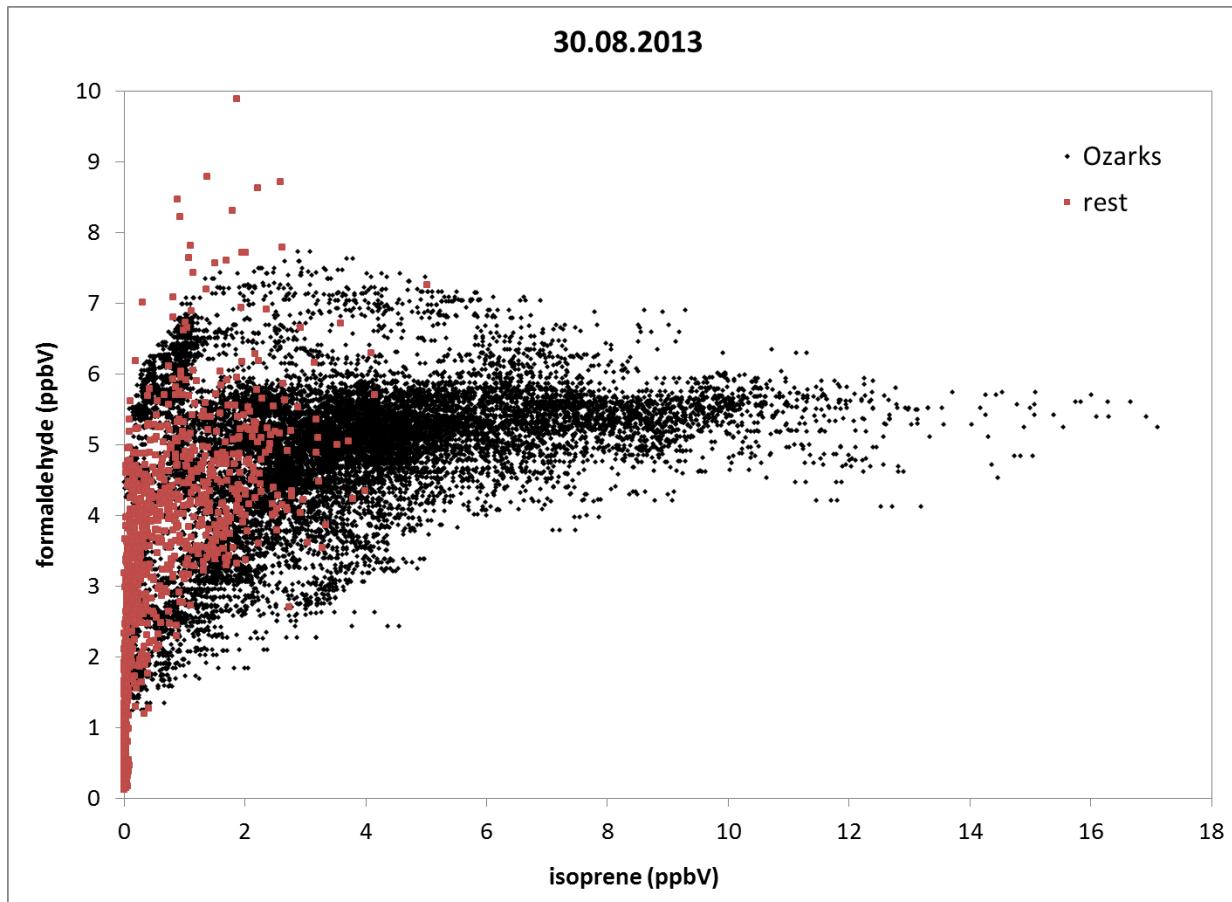
30.08.2013 (#13)



Isoprene / HCHO (August 30)



formaldehyde vs. isoprene



formaldehyde vs. isoprene (cc NO)

